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ABSTRACT

The norms and structure of student subcultures in a public alternative "high school without walls" in a large city are explored. The focus is on the attitudes of subculture members toward the innovative educational program and toward intergroup relations. The strengths and weaknesses of various research methodologies are investigated by analytically comparing the findings from: (1) attitude questionnaires given to alternative school students and a control group, (2) intensive interviews of an alternative school subsample and a control group, and (3) long-term qualitative participant observation and related field interviews. (Author)

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A QUANTITATIVE-QUALITATIVE STUDY OF STUDENT SUBCULTURES IN AN ALTERNATIVE HIGH SCHOOL

Presentation to AERA
Chicago, Illinois
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NOTE

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Introduction

The five of us from the Center for New Schools have worked together as a research and evaluation team for the past five years. A major effort during that period has been a longitudinal study of the development of an experimental urban high school, the Metro High School here in Chicago. The broad purpose of the study was to document and analyze the organizational processes that took place when this school attempted to institute a number of basic changes in educational practice and to assess the effects of these innovative practices on the development of Metro's students. To achieve this purpose, the research team was convinced that the use of multiple research methods had distinct advantages. In some instances a particular method seemed most appropriate for one aspect of the question we wished to investigate (e.g. reading and math achievement tests to assess the program's hoped-for gains in achievement). In other instances, we hoped to achieve a richer and more valid understanding of an aspect of the program by approaching it with a variety of methods (e.g. by studying student's perceptions of student-teacher relationships in the school by using paper-and-pencil questionnaires, structured interviews, and participant observation).

In this session, we will provide you with an analysis of the ways in which each of three major research methods (paper-and-pencil questionnaires, structured interviews, and participant observation) contributed to our understanding of two major issues under study: (1) the student's perceptions of the major innovations attempted by the Metro program and (2) differential reactions to these innovations by distinctive student subgroups within the school. We also hope to give you a picture of the strengths and weaknesses of the various methods we employed in addressing these issues. Perhaps most important we hope to communicate an understanding for the ways in which we worked together as a research team seeking to integrate information gathered by using these multiple methods, and to give you an understanding

of lessons we learned in working together that have implications for future research of this type.

Before the other members of the research team address these issues, I want to provide two additional types of information that set the scene for their presentations. First, some background on the school we were studying. Second, some basic information about the overall research design.

The Metro High School is an experimental four-year high school that currently has total responsibility for the education of 350 students. Its student body is perhaps one of the most diverse in the country, having been chosen by a lottery from 3000 volunteers from every neighborhood in the city. Our background information on the students selected indicates that they closely mirror the overall public high school population of Chicago in their distributions of race, social class, reading ability, and previous success in school. The school's initial prospectus indicated that it sought to achieve four major objectives for student development by implementing five major changes in the process of education for its students. The assessment of how well Metro achieved its goals and in what ways it implemented its proposed changes in educational practice were major emphases of the research. Two major innovations in educational practice attempted by Metro were the use of the community as a resource for learning and the attempt to develop closer interpersonal relationships between staff and students. Thus, for example, Metro students had no conventional school building but participated in learning experiences in businesses, museums, hospitals, universities, and neighborhoods around the city. Further, there was much structured and unstructured contact between students and teachers related to personal concerns rather than to specific subject matter.

The Metro program offered a rare research opportunity. Since students were randomly assigned to Metro from a pool of 3000 volunteers, it was possible to create a control group

who applied to Metro and were never admitted but continued to attend their previous schools. As indicated in Figure I, the major comparison about which we will be speaking is between approximately 100 Metro students and 100 control students. As Figure I indicates, data about these experimental and control groups was collected at two points in time, first when the Metro students entered the Metro program and second 18 months later. At these two points in time, experimental and control groups were given reading and mathematics tests and various information and attitude instruments. As I indicated earlier, these instruments reflected our concern with studying changes in the students related to the program's goals and innovative practices, such as changes in self-esteem and sense of control, reading and math achievement, breadth of experience in the city, acceptance of individuals from other racial and ethnic groups, and perceptions of the climate of previous and present schools. In most areas under study, we found a dearth of well-developed instruments that could be employed. Despite short leadtime, we were forced to develop some of our own instruments (e.g. a school climate scale that tapped dimensions relevant to Metro's goals) or to include standardized instruments about whose validity we had great concern.

An intensive interview was also carried out with subsamples from the experimental and control groups, again as indicated in Figure I. Sixteen students from the experimental group and sixteen from the control group, stratified by race and sex, were interviewed intensively using a structured format that attempted to tap the same areas we had focused on in the paper-and-pencil questionnaire. Our intention was to provide a basis for examining both the existence of changes in students and the validity of our interview and questionnaire instruments.

In addition to paper-and-pencil instruments, and structured interviews, a third major research method employed was extensive participant observation. During the two-year study period, one full-time and one half-time observer worked as part of the research team. Con-

sistent with participant observation methods developed by Bruyn, Glaser and Strauss, and Scott, they sought initially to understand the process within the experimental high school as it was understood by staff and students rather than imposing prestructured hypotheses and categories from other research. Using methods that will be described in more detail by Dr. Stephen Wilson, two major foci of their research became the differences in the climate of Metro that resulted from its attempts to change educational practice and the differential reactions to these changes by distinct subgroups within the school. It is through a focus on these two topics--school climate and distinctive reactions to it by student subgroups--that we will illustrate the use of multiple research methods in this study.

We will proceed with short presentations on each of the three major methods and on the integration of the methods. Since we are still in the final stages of analysis, all results must be considered tentative at this time. The research analysis is scheduled to be completed at the end of August. The purpose of this session is to present you with a description of a working model of integrating different research methods to better understand the processes of starting a new school program in terms of its affect on students. Following the presentations we will ask Dr. West to comment and then open the meeting to discussion and questions. First, Dr. Stephen Wilson will discuss participant observation.

Participant Observation

One of the methods we chose to use in studying student subcultures at Metro was participant observation. We believe that this approach has been underemployed in educational research and that it is necessary for understanding human behavior in educational settings. This discussion will be divided in three parts. Because many may be quite unfamiliar with this methodology, I will discuss briefly the theoretical rationale for this method. I will then describe in general terms what is the nature of the data gathering techniques. A fuller discussion of these issues will be available in our forthcoming paper "Ethnographic Approaches to Educational Research". Finally, I will discuss some of our participant observation research findings related to student subcultures — both for their contribution to the understanding of this phenomenon and as an illustration of participant observation methodology.

Theoretical Rationale

The theoretical rationale underlying the use of participant observation can be divided into two major sections: the ecological and the qualitative perspective. The ecological perspective, represented by the work of Roger Barker (1968) and his colleagues, has asserted that human behavior is significantly influenced by the context in which it occurs. They warn that research methods which interrupt the natural flow of events risk distorting much of the phenomenon being focused on.

The qualitative perspective asserts that traditional quantitative research methodology often overly prestructures the methods of data collection and analysis. Qualitative researchers such as Severyn Bruyn (1966) and Glaser & Strauss (1967) warn that the imposition of categories of observation and analysis can interfere with an understanding of the phenomenon being studied. To them the most important aspects of behavior to understand are often the meanings that participants attach to it. They urge the use of a phenomenological or inductive kind of research which allows the investigator to discover meanings and theory which emerge out of

a first hand knowledge of the phenomenon.

Together the ecological and qualitative perspective provide a strong rationale for the use of participant observation and field interviewing. We felt it was an especially important method to use in studying alternative schools.

Description of Techniques

For many who are unfamiliar with this method, participant observation is synonymous with casual "looking around", "journalistic reporting", or "anecdotal stories". In actuality, participant observation is a systematic and rigorous method long used by anthropologists for gathering data about human behavior and for generating and testing theory.

Researchers gather information from many sources: verbal interaction between participants, verbal interaction with the researcher, non-verbal behavior, patterns of action or non-action, and documents. They come daily, listen to what people say, watch what people do, ask questions, and regularly record their findings. They use this information to discover where are fruitful sources of information and to build tentative theories which guide subsequent data collection. They systematically test these emergent theories by gathering information likely to bear on the issues. In some ways it makes sense to think of participant observation as a series of studies which follow each other daily and build on previous studies in a cybernetic fashion.

Some of the information gathered by participant observation is similar to that gathered by systematic quantitative observation or interviewing. Much of it, however, is different in kind. The researcher can link the information he gathers by various methods together in a way that is nearly impossible with other methods and he has access to some unique kinds of information. For instance, he can compare what a person says in response to his questions

with what the person says to other people, with what he says in various situations, with what he says at various times, with what he actually does, with various non-verbal signals about the matter (for instance, body postures) and with what those near to the person feel about the behavior. Furthermore, the participant observer in field interviewing knows much about the persons or incidents referred to and about the expressions used in the answers to his questions. Finally, the participant observer cultivates an empathetic understanding with the participants that is nearly impossible with other quantitative methods. The researchers shares the daily life with participants and comes to understand their feelings and reactions in a first hand way — through experiencing them himself in a controlled way.

I have only briefly discussed similarities and differences between participant observation and other more commonly used methods. This discussion was necessary in order to explain what participant observation is to those who are unfamiliar. More discussion of how methods fit together will come in later presentations.

Student Subcultures

As is typical in this kind of qualitative observation study, we started with a series of inquiry focuses rather than specific hypotheses. We wanted to know what features of life in this alternative school setting would explain the successes and failures of the various innovations attempted. We were alerted by the work of sociologists such as Etzioni (1965) and Coleman (1962) that informal subcultures are an important characteristic of organizations in general and of schools especially.

We started, then with one of our focuses on student subcultures. We asked questions such as: Did a student subculture establish itself at Metro? What was the nature of its norms? What was the role of the student subculture in the evolution of the various innovative programs?

We quickly discovered that the idea of a single subculture was inadequate to describe Metro. Coleman's research had suggested that though there were different values various groups of students might hold, there was a relatively integrated subculture by which most people defined themselves. There were separate clique and friendship groups and there were marginal people and groups who rejected dominant values, but nearly everyone agreed on who was in the leading crowd and what were the ascendant values. There was no such single set of values or a single status hierarchy at Metro.

Many observations accumulated to lead to this conclusion. Groups of students had distinctly different styles of behavior. They dressed and talked differently. They tended to claim certain areas of the school as their territory. They reacted differently to external cultural events such as music, movies, and news events. They expressed different

life goals. They tended to interact more frequently with students from their own subgroup than with those of other groups. Most importantly for what we're discussing here, they differed on their attitudes toward features of the school and on the way they participated in organizational activities. The nature of these groups raises many questions about traditional research on student subcultures. We will concentrate here, however, on the differences in the ways these subgroups reacted to innovative features of Metro.

The program we will concentrate on is the school without walls feature of Metro. Many of these new schools have sought to use the city — its institutions and people as educational resources. Students spent much of their days outside of classrooms in the institutions and communities of the city. The innovators felt this would be an especially effective and appropriate form of urban education.

Subgroups differed both in the way they dealt with the institutional processes associated with the innovation and in the ways their attitudes and skills were affected. The first issue, institutional processes, is concerned with how in daily terms did the school arrange for students to come in contact with the city—for instance, how did students learn about opportunities, make choices, and get to these experiences. To many of you, these daily details may seem unimportant. Yet, one important lesson we have learned in our work with educational settings is that these details are extremely important. No matter how sound the rationale behind an innovative idea might be, the way it is actually implemented is crucial for its success or failure. Many ideas which seem good on paper have trouble in reality for reasons not directly related to their main premises. Participant observation is an especially powerful technique for uncovering these details.

Students had to find out in some way what opportunities existed for educational contact with the city. At Metro the possibilities included individual placements with city institutions,

courses taught by people in the city, and courses taught by the Metro staff that made use of the city. Administratively, students had to arrange schedules which satisfied their desires, credit requirements, and time realities. Each quarter a catalogue was produced by teachers which described all the offerings. During registration week the counseling groups (a modification of home rooms) devoted their time to this task of scheduling with the help of their counselors. To most of you, this process must seem like a fairly straight-forward, adequate method of making students aware of the possibilities and letting them chose.

Through participant observation we discovered, however, that this process was phenomenologically very different for students in the various subgroups. YC students seemed very in tune with the process and often found more courses than they could fit in. SA students, on the other hand, had trouble filling in their schedules and complained about the process and the offerings.

In part these differences stemmed from the different approach of each subgroup to the process. YC students were very comfortable with the catalogue. Field notes describe the following event:

> On the day the teachers were mimeographing the catalogue after school, three YC students were reading each page as it came "off the press". SA and SO students were also in the area but they paid no attention to the catalogue preparation.

Customarily, YC students would deal with registration in the following way: They would sit down and methodically read through all the offerings, and make notes about what interested them. If there was something they didn't understand, they would ask their counselor and if the counselor didn't know the answer, they would find someone who did. Furthermore, discussions about the courses would be frequent with friends — most of whom were from the same subgroup.

SA students, on the other hand, did not deal with the catalogue and registration in the

same way. Customarily, the following was observed: Rather than reading the catalogue carefully, they looked only at the summary sheets which listed courses by the credit they offered or by the time slot in the schedule. In conversations between counselors and students (and between the observer and students) these students often revealed that they had a very incomplete knowledge of the offerings. They had not noticed many courses and they had only vague notions about many others. When the counselors had time to describe courses in a graphic and meaningful way to students, the students indicated that some of the overlooked possibilities interested them. There are several possible explanations about why these students dealt with the course choice process in this way: For instance, the actual reading involved was a burden. SA students were less familiar and comfortable with the bureaucratic process than other groups. They had few expectations for interesting courses.

What is important to note here is that a large subgroup of students were unaware of many of the possibilities. The problem was especially severe with the unconventional offerings out in the city, for which previous experience gave few hints about their nature. For these SA students, then, the situation was functionally the same as though the school did not offer these courses out in the city. Understanding these differences in student awareness is extremely important both in designing effective programs and in testing the basic premises about the effects of being a school without walls.

A similarly important difference in reactions to institutional processes was the way various subgroups coped with getting around the city. To the staff, where courses took place was not very important. They expected students to deal primarily with course content. Also since courses met all over the city, the school had to find a way to facilitate student transportation. The school included funds in its budget to pay for city transit tokens for students between classes. Each quarter, each student worked with his counselor to figure out how

many tokens were needed. The counselor then distributed this amount to the student each week. Again, this solution seems like an adequate and fairly unimportant administrative detail.

In reality getting around was an important consideration. The staff noted that SA students were absent in higher proportions than other groups from courses away from the school headquarters. When the teachers asked the students why, students often complained that they had no tokens for the bus. Teachers protested that they had given these students enough tokens for the week and asked what had happened to them. The students said they didn't know (and they probably didn't).

The observer knew, however. SA students, many from lower class backgrounds, used their tokens when they had them. They shared them freely with friends. Although the school didn't provide for student transportation to and from school, these students used them for these purposes. Similarly, these students used the tokens for trips that the teachers defined to be within walking distance. Hence, when the end of the week rolled around, these students did not have tokens for getting from class to class.

SO and YC students, on the other hand, husbanded their tokens or if they ran out, used their own money. Similarly, when special traveling requirements came up in courses, SO and YC students had no trouble accepting the teachers promises of future repayment. SA students, on the other hand, had difficulties with these arrangements. They felt insecure about the money and often would opt to cut the class that required the extra traveling. Teachers became sensitive to the SA students' insecurity about tokens and difficulties managing the weekly allotment. Arrangements were worked out that minimized the strains. Nonetheless, the finances of moving around was always an issue for these students.

The orientation of SA students to traveling was different from other groups in yet another

important way. Traveling was often viewed as a trauma. It meant leaving the security of friends and of a place which was comfortable. To some degree this reluctance was based on an actual fear of unknown neighborhoods or of neighborhoods controlled by certain gangs. It was also based, however, on a more vague and general apprehension and a positive clinging to the secure environment of Metro. This incident will perhaps illustrate the global nature of the fear.

> When the announcements of Metro were sent around to all ninth graders in the city, my wife was teaching in an inner city high school. Her students, many of whom rarely ventured outside their south side ghetto, expressed all kinds of suspicions of this new school. They said they didn't like the idea of traveling downtown each day. Some wondered if it were some kind of trick. They didn't want to leave the security of their neighborhood and their schools.

These two tendencies meant that the SA subgroup dealt with the school without walls feature differently than the other subgroups. Their difficulties getting around exerted a pressure against them taking advantage as fully as they might have.

The subgroups also differed in their general attitudes toward the school without walls idea. YC students were excited by the program and generally agreed with the philosophy it represented. SA students were ambivalent: they liked the opportunity the program gave them for action and for non-reading and writing courses and yet they were somewhat doubtful that these experiences out in the city were validly school. The SO students were the most doubtful about this philosophy. They were worried that the unorthodox courses were not preparing them for college or jobs. They wondered what prospective employers or admissions officers would say to these courses. Although they enjoyed some of the courses in the city they constantly agitated for traditional courses within the school.

The subgroups also differed on how much they came to accept the idea that there are

valid educational experiences within everyone's communities and to feel that these were worth being incorporated officially into the school program. YC students were quite comfortable with this idea. They eagerly tried to get the activities they did outside of school accepted as school activities. Furthermore, their families often were involved in vocations, and avocations that were easily adopted into the program. For instance,

> One YC student's father ran a community theater which offered several courses.
> Another YC student's father offered a course in research techniques.
> A YC student's mother offered to teach a course on woman's liberation.

SA students (and to some degree SO) did not easily come to accept their own activities or their own environments as having anything to be incorporated into the school's programs. Their families often were not involved in activities that were so easily adopted. The following incident illustrates the lack of confidence these students had in the contributions involving their communities.

> A teacher was on the phone trying to arrange a place for the cheerleaders to practice. The teacher made three calls to no avail. A SO student who was sitting by her hesitatingly volunteered that there was church in her neighborhood that had an auditorium but that she doubted the school would want to use it. The teacher was surprised that this student was so reluctant and tried to reassure her that this was a valuable lead and that she should have spoken of it previously. The teacher said "That's what Metro is all about!"

Summary

In this presentation I have emphasized the differences between groups. It is important to note, however, that most students from all groups — including the SA — had valuable and enjoyable experiences with courses in the city. Similarly, YC students although in tune with the processes involved and with the basic philosophy did not capitalize on the courses

the way they might have. Finally, the staff of the school did not passively watch these differential reactions, but tried to address the needs of the various groups.

The kind of information we have discussed is essential knowledge for anyone working with these kinds of innovative schools. It also has important ramifications for social scientists studying adolescence and organizational behavior. It would be difficult to gather by methods other than participant observation.

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Paper-and-Pencil Questionnaires

As I mentioned earlier, paper-and-pencil questionnaires were administered to Metro and Control students at the time that Metro opened and again 18 months later. Scales employed were chosen to assess changes over time in major areas in which Metro was seeking to bring about student growth and also to assess students' perceptions of major areas in which Metro was attempting innovative educational practice as compared to practices in traditional Chicago schools. The questionnaire dealt with the following topics:

1. Self-Image
2. Sense of Control
3. Breadth of City Experiences
4. Preference for Active Learning
5. Perception of School Climate
6. Racial Attitudes
7. Characteristics of Desired Ideal Job
8. Nature of Hoped-for Life Accomplishments
9. Reading Achievement
10. Math Achievement
11. Background Characteristics

In presenting some results from this analysis, I am attempting to deal with two problems. First, some key parts of the analysis are not completed or completed only in a preliminary form. Second, those parts that are completed represent far too much information for me to communicate effectively in this brief presentation. Therefore, I have chosen to concentrate on a few points pertinent to the themes of school climate and subgroup difference that are the focus of our overall presentation. These points fall into two areas: Metro-Control differences and Subgroup differences within the Metro Group.

Metro-Control Group Differences:

The major method for analysis of differences between Metro and control groups was multivariate analysis of covariance with pretests employed as covariates. The results are presented in Figure III A. Although it is not central to our discussion today, it might be of interest to note P value for reading of less than .0342 reflects the fact that Metro students gained in reading at a rate greater than the national average, while controls gained at less than half the national rate. In math, the progress of both groups was below the national average. Achievement data over a longer period will soon be available.

More pertinent to our concerns today, the highly significant Metro-control differences on the scale "Breadth of City Experience" (p less than .0001) suggests that Metro was indeed achieving one of its major goals, i.e. exposing students to a variety of situations and contexts in the city not experienced by students in traditional schools.

Further, the highly significant differences on the scale "Perception of School Climate" suggest that Metro was in fact conducting a program significantly different from traditional education and consistent with its desired educational plan. The dimensions of difference embodied in the School Climate Scale include: Tolerance for Individual Differences by students and staff, Closeness and Non-compartmentalization of student-staff relations, and Degree of Inquiry-Oriented Learning. The Metro-Control differences on these and other dimensions that make up the School Climate scale are extremely large. To understand the magnitude of these differences, consider the format for school climate items as exemplified in Figure III B.

If a student really believes something, but most other students don't, he'd better not talk about it.

Exactly like my school	A little like my school	Not much like my school	Not at all like my school

Metro students were asked on this scale to rate the school they had come from in the first questionnaire administration and the Metro School in the second administration 18 months later. Control students were asked to rate their present school at both administrations. The percentage of student responses fitting the "ideal" response (in the case of the example above, "Not at all like my school" is shown in Figure III C).

As you can see 53% of Metro student responses concerning Metro fit the ideal school pattern, about 3 times more ideal responses than for Metro students rating their old school or control students rating their schools.

Given the fact then that there were significant differences at the .05 level or better in Breadth of City Experience, Perception of School Climate, Reading Achievement, and probably on several other variables not yet fully analyzed, we then asked whether within the Metro group there were significant differences on the variables under study between the subgroups that were developed on the basis of Steve Wilson's participant observations. Three raters from the research staff who were familiar with the student body independently classified students into one of the six subgroups. Initial agreement was reached on more than 90% of the students. The remaining 10% were given a subgroup classification through negotiation between the three raters. These disagreements appeared to center primarily on students who had come into Metro relating to one subgroup and then changed their subgroup identification.

Using these subgroups as variables in a multivariate analysis of variance, we then carried out a series of comparisons of subgroups on the pretests, posttests, and posttests with pretests as covariates. To illustrate these findings today, we will concentrate on the comparison of the White School Alienated Youth Culture and Black School Alienated Groups. As we indicated previously, both were alienated from the traditional school and many in both groups had been on the verge of dropping out of their previous school. However, the two groups

were extremely dissimilar in other respects, Black School Alienated students were primarily from low income families, had poor basic skill levels, and a long history of school failure. White School Alienated-Youth Culture students were mostly middle class, had adequate basic skill levels, and had generally been doing well in school until a fairly recent point when they got fed up with it. Further, as you will remember, it was the Youth Culture students whose values seemed, based on participant observation, to be most consonant with those of Metro; while the values of Black School Alienated and White School Alienated ethnic groups seemed less consistent with Metro's values. Thus, the multivariate analyses comparing these two groups can answer several questions:

1. Were the two subgroups different on the variables under study when they entered Metro?

2. Were the two subgroups different on the variables under study after 1 1/2 years at Metro?

3. After statistically equating pretest scores were there significant posttest differences, indicating a differential treatment effect for subgroups?

These questions can be answered by examining the p-values presented in Figure III F. The multivariate analysis of the pretests indicates that the two subgroups came into Metro significantly different at the .05 level on Breadth of City Experiences, Preference for Active Learning Experiences, Reading Achievement, and Math Achievement. These strong differences in pretest results further buttresses the validity of the subgroups established through participant observation, as does an analysis of background variables for these subgroups from the questionnaire that can't be discussed in detail here.

Turning to the multivariate analysis of posttest variables without covariates, (also in Figure III F) we can see that after 18 months at Metro strong differences still remained between the two subgroups. On every single variable under study, there is a difference between the

two subgroups significant at the .05 level or less, including those variables that showed no Metro-control differences in the analyses presented earlier. One particularly interesting difference in terms of the discussion today is on the School Climate Scale, which indicates that the Black School Alienated group perceived Metro as significantly less tolerant, open, and supportive than did the White School Alienated Youth Culture group.

Turning to the Posttests with Pretests as Covariates, we find a striking contrast to the first set of Posttest results: not one p-value in this analysis approaches statistical significance. Thus, one summary of the results might be: the two subgroups came in very different and were still very different after 18 months, but the effect of Metro was roughly the same for both subgroups. There are however, some suggestions that the effect of Metro might not be the same for the two subgroups if one examines the means of the two subgroups on pre and post tests in Figure III F. Note, for example, that as Figure III F indicates, the gains in reading and perception of school climate for the White School Alienated-Youth Culture students was over twice as large as the gains for the Black School Alienated group. Thus, unequal effects of Metro for different subgroups may exist but merely fail to reach statistical significance because of small sample size. To keep these differences in perspective it is important to note from the table that the gain scores in Breadth of School Experience, Perception of School Climate, and Reading Achievement were still substantially greater for the Metro Black School Alienated group as compared to the Control group as a whole.

In summary, the questionnaire and achievement results support the following conclusions:

1. From the perspective of students, Metro successfully initiated changes in school climate consistent with Metro's educational plan and much different from other Chicago high schools.

2. The validity of subgroup classifications from participant observation is strongly supported by marked differences between students in different subgroups based on background, skill, and attitude measures administered when students entered Metro.

3. Black School Alienated and White School Alienated-Youth Culture subgroups who were quite different in their skill levels and attitudes when they entered Metro were still significantly different on a wide range of dimensions after 18 months. The effect of Metro, as reflected in these measures appears to be consistent across subgroups, although there is some evidence in the data that prompts us to continue to look for significant differential effects of Metro on subgroups.

The Analysis of Structured Interviews

In addition to our use of large-sample questionnaires and ongoing participant observation, we collected information on a wide variety of topics pertinent to Metro's goals for student growth from in-depth structured interviews which allowed for open-ended student responses to project questions and probes. In the following presentation, we will discuss some of the substantive and methodological insights which we feel that we have gained from this phase of our investigation.

A. The Method

Our intention was to gather information which would allow us to develop deeper insights into the student's perception of themselves and their relation to the school environment. To this end we developed a large interview whose format was open-ended and which was intended to encourage the student to talk spontaneously and express his own ideas in his own terms concerning the various topics which interested us. That the students should be allowed to express themselves in terms of their own priorities and conceptual frameworks in response to questions without the imposition (real or potential) of the researchers' thought categories seemed to us to be especially important in an innovative setting.

The subsample we selected from the available student and control groups consisted of sixteen incoming Metro freshmen, and sixteen controls who had applied to enter Metro but had not been chosen in the random selection process. In addition the sample was selected in such a way as to include even numbers of men and women and of blacks and whites within each group.

The students were ideally interviewed twice: Once shortly upon entering Metro and once again after the elaspe of 18 months. The interview formats were substantially the same except that in the pre-interviews students in the Metro program were asked, in the section

concerning school, about their impressions of the school they had just left, while in the post-interview all groups were asked about the school they were presently attending.

The questions in the interview covered topics relevant to Metro's proposed goals and changes in educational process including self-image, sense of control, problem-solving strategies, attitudes concerning race and ethnicity, etc. One important section of the interview was devoted to exploring the students' attitudes toward the school. Our analysis of the massive amount of material gathered by our interview technique has thus far principally confined itself to perceptions of the teachers and of the school. Some of these results will be discussed below.

As already stated, the design of the interview was intended to inspire spontaneous discussion on the part of the student. We have for the most part been analyzing the interviews through a form of quantitative content analysis that allows raters considerable leeway for judgment. Rather than developing a complex scheme for the fine analysis of the occurrence of lexical items or of grammatical constructions, we have concentrated on a more straightforward approach, in which we have allowed the coder a considerable amount of judgmental leeway in the analysis of coherent, actor-relevant ideas. Reliability will be established through inter-rater reliability in making these judgments.

The first step in our analysis consisted of the qualitative examination of a limited number of interview protocols to determine the dimensions of the school experience which are of major importance in the perception of the students. We have done this for school climate in general and for the specific issue of student perception of teachers. In each case, we have derived slightly more than a dozen important dimensions which seem to be meaningful to the students. In terms of teacher characteristics, for example, students seem to be thinking in terms of the following concepts, among others which are cited here as examples of our larger inventory of coding categories (see Figure for complete list).

1. DIALOGUE: The teacher who engages in dialogue is described as one who can and will communicate fully with the student. The student feels that he can express an idea to the teacher and the teacher will understand and try in turn to communicate this understanding back to the student. The non-dialogue-oriented teacher on the other hand, is described as leaving the student with a feeling that the two of them have been "talking past" one another.

2. NON-COMPARTMENTALIZATION: A perception that many of the students have of the Metro teacher is that the important relationship is between two human beings, not between two compartmentalized roles, ie. teacher and student. This teacher will get interested in the student's personal life and talk seriously about non-school matters. Again, this characteristic is evaluated very positively. The opposite of the non-compartmentalizing teacher is the teacher who communicates to the student a sense that they are permitted to relate to each other within the confines of the student-teacher role dyad only.

Similar categories were derived for characterizations of school climate in general, for example:

4. FREEDOM FROM PRESSURE FROM FELLOW STUDENTS: Of considerable importance to many of the students is the school climate dimension whose one pole, represented for many by Metro, is the kind of school in which a student can act as he or she pleases without fear of bullying, gossip or ostracism from the other students. Many complaints about the regular school system in the Metro pre-interviews and the control group are concerned with traditional gang harassment, high school cliques, peer group pressure of various kinds, etc.

6. FEELING OF CAMERADERIE, WARM SOCIAL COMPANIONSHIP WITH OTHER STUDENTS: Of considerable importance to many students was the degree to which the school climate provided an atmosphere of personal closeness and warmth between fellow students. Again, the opposite pole of this dimension is represented by complaints of feelings of isolation and alienation from the other students.

Once derived, positive and negative poles of these dimensions were used as coding categories in a quantitative content analysis of selected sections of the total interviews in which the focus was on most and least favorite teachers and general school characteristics, respectively. We determined the frequency of use of the derived categories and also whether they were employed positively or negatively.

B. Preliminary Results

The coding of the interviews is proving to involve a large investment of time, and as yet we can only speak from incomplete results. Nevertheless, we will attempt to assess what we can from the information available.

The first and most striking observation is that the evidence gained from the questionnaires and participant observation concerning the high student evaluation of school climate in Metro as compared to other schools is strongly reinforced by the interview results (see Figure). The frequency of positive characterizations of Metro in the post-interview is more than five times that of negative characterizations, based on an incomplete tabulation. In contrast, Metro students in describing the schools from which they came make twice as many negative as positive comments. Also in the pre- and post-interviews of the control group, negative characterizations greatly outnumber positive characterizations.

Similar but less extreme results can be seen in characterizations of teachers. Again, the number of positive evaluative statements about teachers increases with exposure to the Metro program. That these results are less extreme than for school climate in general can probably be explained by the fact that most students expressed an initial reluctance to make critical comments about specific teachers, as opposed to general features of the school.

This type of quantitative content analysis requires one to make assumptions, such as that frequency is a measure of intensity (Berelson, 1952), which have been questioned by some (e.g. Marsden, 1965). We feel, however, that the above results are highly congruent with the results of the participant observation work and the questionnaire scale and subscales on school climate. In addition they are in agreement with the qualitative feel of the interviews, i.e. that Metro students in the post interviews were frequently getting carried away in their praise of the school while pretest and control subjects were often using the interview as an

opportunity to unleash rather bitter complaints. Thus, as an evaluative instrument in alternative school situations, we feel that the type of interviews and content analysis we used have high potential value.

A second important result of the interview analysis is the derivation of the categories themselves. In comparing categories such as "dialogue" with our own personal knowledge and that of other educational researchers we feel that they reveal important dimensions of students' cognition vis a vis schools and teachers in contemporary American society. These are emic or actor relevant categories, i.e. they represent the dimensions the students actually use in their perception and cognition concerning the school as opposed to categories that researchers might impose upon them from the outside (as we were forced to do in developing the questionnaire). They can only be conveniently derived by sitting down with students, as we did in the interviews, and allowing them to express their ideas in their own terminology. Thus, we feel that the derivation of these categories is an important humanistic and phenomenological step in the development of practical understanding of the students' needs and wants within a school context.

A third important area of results is in the revelation of the relationship among the different possible dimensions of evaluation of the school and its teachers. This can be seen for example, in student characterizations of teachers: While a large number of students in the post-Metro subsample, for example, phrased their positive characterizations of teachers in terms of the afore-mentioned dimensions of dialogue and non-compartmentalization, few post-Metro interviews, or indeed any interviews, showed a tendency to characterize teachers either positively or negatively in terms of "concern for students' career" or in terms of "justice" or fairness. Sometimes there is an interesting asymmetry between the priorities displayed in positive characterizations vis a vis negative characterizations. Whereas control group interviews (pre

and post) and pre interviews with Metro students seem to be turning up a considerable concern about authoritarianism as a negative feature in traditional schools. The logical opposite, non-authoritarianism, is seldom coded as a positive feature in the post interviews of Metro students. One might expect that students who complain, in the regular school settings, about authoritarian teachers, would specifically praise the non-authoritarian aspect of the Metro teacher's role. It appears that what is happening is actually more complex than that: Conceivably in the regular public schools general student dissatisfaction with relationships with teachers becomes phrased exclusively in terms of complaints about strictness, fussiness, and other authoritarian characteristics, while the more positive relationships found in the alternative school setting encourage the student to differentiate other aspects of his role relationship with the teacher (such as "dialogue"). In addition, thereis the possibility that in the regular schools, where there is pressure for teachers to "keep their distance" from the students, fussy authoritarian behavior becomes the technique by which the teacher maintains himself in his compartmentalized role and evades real dialogue with the students. These two factors may both be in operation simultaneously, of course. It is hoped that the further analysis of our data will shed more light on this analytically difficult, but supremely important topic.

Similar variations in the priority of the dimensions can be seen in general characterizations of school climate. The dimensions of "Freedom of Academic Choice", "Freedom of Personal Expression in Class", "Freedom from Pressure from Fellow Students", "Feeling of Cameraderie and Warm Social Companionship with other Students", and "Feeling of Interest in Class, Teaching, etc.", are much used by students, both positive characterizations (mostly of Metro) and negative characterizations (mostly of other schools). Perhaps it might come as a surprise to some that few people characterized the schools either positively or negatively in terms of the dimension "feeling of ability to Cope with Classwork, etc.", "Feeling of Positive Challenge from Classwork", or "Direction and Organization in the Program". Again,

there was a pattem of asymmetry in the use of certain dimensions in this scale, for example, comparatively many people used the dimension of "Feeling of preparation for the Future" as a positive characterization, (need we add, mostly in reference to Metro), while very few used its logical opposite, "irrelevance to the Future" as a negative characterization. This pattem is probably explainable in terms of Metro's strong emphasis on real-life experience.

Inasmuch as we are dealing at this point with incomplete tallies, I have used only extreme cases as examples in the above section. Nevertheless, we feel that the interviews as we have analyzed them provide a very good idea of the priority, or relative importance, of the different dimensions along which schools and teachers are evaluated in the minds of students. The question of priority could also be handled in limited option questionnaire format of course, for example by having the subject rank items in a scale in descending order of importance. Our experience, and that of others as well, suggests that this latter is a cognitive task to which the average individual is unaccustomed and approaches awkwardly with much change for misunderstanding and distortion, however. Again, in attempting to develop a humanistic and empathetic as well as analytical understanding of the student and his responses to the school, we tend to prefer a naturalistic process which allows the student to express himself in his own way.

Finally, and going beyond the question of quantitative content analysis, we find that in general the interviews provide more insight than the questionnaires or the participant observation material in the development of a qualitative understanding of the student as a human individual. One aspect of this understanding is currently under way, namely the compilation of detailed case histories of individuals chosen to represent the student subgroups in Metro identified in the participant observation phase of the result. However, the compilation of specific case histories is not the only qualitative use of the interview material. We feel

that the richness and depth which only this type of open-ended interview provides can serve to fill out and illustrate insights gained by the quantitative content analysis and by the methods of large-sample questionnaires and participant observation, hence making them a crucial resource for developing training formats based on our research.

C. Methodological Conclusions

Interviews of the type we carried out have a number of obvious disadvantages. One of these is their ponderousness: The man-hours expended by our team in the collection, transcription and analysis of the interviews will in the end probably be many times that expended in the other techniques. In addition, the sampling limitations of large time consuming interviews pose a major problem. For example, in the samples we used, the attrition (through moving without leaving a forwarding address) of Black male interview subjects from our sample of Control group post-interviews is posing a major problem for quantitative inference. Further, once having discovered the student subgroups through participant observation and studied their characteristics through questionnaires, we find that the sample size of the interviews may not allow us to form many quantitatively based conclusions about these important subgroups (although, as has already been stated, one can nevertheless fill out the picture of individual members of the subgroups through the use of interviews).

Some of these problems could be avoided in future evaluative operations by learning from the mistakes of the present study in the use of interviews and content analysis. For example, in the future we will probably strive to create interviews which are briefer and conceptually simpler, which will involve less time and effort in their analysis and will permit the use of much larger samples. Efforts will be directed toward the development of interview formats which permit and encourage the subject to continue talking as his own inclination leads him without the intrusion of a large number of relatively unproductive minor side-issue

questions from the interviewer. At the phase of quantitative content analysis, these latter have chiefly served to distract and frustrate the data coders.

However, it is still our feeling that the admittedly imperfect interviews which we used in the present study provided us with insights which we could not have otherwise achieved, concerning the dimensions of the students cognitions vis a vis schools and teachers, the priorities attached to different dimensions by the students, and the holistic functioning of the individual student as a system.

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A Case History of One Metro High School Student Constructed from Interviews and Field Observations

One purpose of this case history of Vic, a black male student at Metro, is to show the effects of Metro on an individual student. The second purpose is to make an attempt to enrich the quality of the data collected by combining data from the interview protocol with field observations.

The following narrative drawn from field observations will provide some insight into Vic's individual life-style as he went about his day-to-day activities in the Metro School. Later I will focus on information from the pre and post interviews in terms of changes in Vic's perception of school and in his knowledge of the city of Chicago and ability to use the city as a learning resource.

Vic is approximately 5'7", olive-brown complexion, and has a charming smile. Vic's individual mark of identity in 1970 was the big Apple Hat with the wide brim. This was his trademark long before the current fashion was established.

When Vic entered Metro, he, along with another student Jerry, spent much of their time in the Metro lounge watching T.V., playing cards, and just generally, goofing-around. Vic had an impish nature and although he was not what you would call a "bad" student, he was somehow always involved in pranks and problems that occured at Metro during his first year. If there was an incident on the elevator Vic was involved, but he was never blamed. If there was some disturbance in the lounge in terms of record players being too loud or T.V. playing too loud, maybe Vic was there, but not appearing to be directly involved.

Vic was well liked and he was often seen with one group of students and later another. Sometimes with white students, and sometimes with black students; however, his constant companion was Jerry. He particularly enjoyed playing pranks on Jerry. Here is what Vic

had to say about his relationship with Jerry in the pre-interview: "It seems like I'm the lucky one in the group, everytime something happens, I'm the one that gets away and Jerry gets blamed. Everytime Jerry and me would be together and something happened, he'd be the one. We were running down the stairs, he slipped and broke his glasses - cracked them at least. It was my idea to run down the stairway, he didn't want to do it but I insisted on going down. We went down. He slipped and I said 'Are you alright?', you know. I wanted to laugh. We started to laugh and asked him was he alright. I just started bustin' out laughing, we got outside and starting putting his glasses back on and we began to laugh together."

By not attending classes, both Vic and Jerry received few credits during the first semester at Metro. In the second semester, Vic enrolled in a scale model building class at Perkins and Will Architectural firm. In this class, students working with architects in the firm, designed and built their own scale model. One of these models was brought to Metro and Vic and other students in the class received a lot of praise. When Vic's talent for art was discovered, you would often see him making posters and signs of events that would take place in Metro. Using his skill in this way, Vic was always being called on by different groups to help them out in projects which required some kind of artistic talent.

In the Spring of 1970, Jerry and another Metro student were drowned. Following this tragic occurrence, Vic once again began to spend more time in the lounge, often by himself and on occasion talking with teachers and other students. After some time, Vic renewed his interest in Metro classes and was seen less frequently in the school lounge. He was involved in less incidents, in terms of trouble, around the school.

I have briefly described Vic using illustrations from field observations and the interviews so you would get some feel for him as a person. Now I turn specifically to his attitudes towards teachers, school climate, and the city. In the pre-interview, Vic described his old school

as over-crowded and with teachers who didn't care much about you.

> "There was so many kids in the art class, the teacher didn't know our names and sometimes they would give us work to do and then forget that they had asked us to do it."

> "Sometimes I saw my counselor, but there's so many kids in the school - 1,000 - and someday you come to him and he know you and you come back a little later, he can't even remember your name."

Vic described what he considered as unfairness on the part of the gym teacher this way:

> "The gym teacher say he based half our grade on being in gym and half on health and I didn't do so good in health because I didn't pass the test. However, he said our grade would be based on half of each. I got 'A' in gym but I still got a 'D' and I didn't think he should do that."

Later during the post-interview, Vic described his relationship with teachers in Metro this way:

> "Everybody at Metro seemed to care about me. Bruce helps me all the time with my art stuff and Jewell, she and I went down to Florida together and we did a lot of stuff. We collected sea shells and driftwood. I think at Metro, all you have to do is ask somebody somethin' and they will try to help you even it it's a problem not even in school."

In the post-interview, Vic talked a great deal about how much he enjoyed his classes and how much he learned at Metro. This may be as far as a regular interviewer without a field observation relationship would have been able to get. During the interviews it seemed that Vic was giving me responses which he thought I as interviewer wanted to hear and which he judged to be the "proper" response to the structured interview question.

Because of our relationship, however, developed over long term contact in the field and because of field observations indicating that Vic often did not attend classes and failed to keep appointments, I was able to probe these responses. He was able to admit that he felt that there was no one pushing him at Metro and hence he failed to carry out many of

his responsibilities. Our relationship and knowledge about each other's life style made it difficult for him to cover up and fake it in the interview.

City as Resource

Vic's knowledge of the city of Chicago and ability to use the city as an educational resource prior to entering Metro consisted for the most part of a keen awareness of gang territory. In the pre-interview he said:

> "Like when you think of the South Side you think of the Blackstones and you know all them people over there. You be scared to walk the streets, you know, all gettin' hurt. On the North Side, you hear about people goin' takin' caskets from a funeral home and all that jive like that."
>
> "The Cobra Stones (gang) are over there on the North Side and somebody got shot, or somethin', and they supposed to be taking the casket of a friend from the funeral home and all that jive like that and the Black Panthers supposed to be going over there talkin' to them, you know."

He also talked about his confusing experiences with public transportation:

> "I got on the wrong 'El' one time, I got on the 'B' El line instead of the 'A' El line. I was going to class. I was supposed to get off at Harrison and I was rushin' to catch the El and caught the 'B' and went way down to Cicero and Kedzie, one of them. I had to catch the bus back after gettin' my directions from a man."

Early field experiences with Vic also revealed his anxiety about the city. The night before Vic was to go to his first visit to a Metro class on the far South Side in the city of Chicago, he asked if I would meet him on Congress and show him the way to get around the South Side. He later told me that one reason, in addition to the gangs, that he was anxious about going to the class was that he didn't really know how to find his way around.

During the post-interview, Vic indicated he was more comfortable with the city. He had this to say about Metro classes and the city:

> "My consumer education class is out on the South Side. I met some nice dudes out there who was going to the grocery stores, you know, checkin' out to see if they had some bad meat and stuff. My design class is at Perkins and Will Architectural firm. That's downtown at the Loop and I also take class over at the Fiedl Museum in Art. My mother's been on my case, says I haven't been doin' my art lately and I was tellin' her that I got another class with Jerry at Metro and what we were doin' is goin' all over the city studying famous buildings."

Field observations also revealed he had become more comfortable with the city. In his senior year, Vic was a member of the Graduation Party Site Committee. Their job was to find an inexpensive place for the party. The sides under consideration were all over the city, South Side, West Side and North Side. Vice made it a point to visit each site.

I think we can come to two conclusions about the usefulness of this type of case history, made possible by combining interview information with field observations:

1. First, we get a more personal and rich sense of what being a student at Metro was all about.

2. Second, it warns us in a very specific way of one danger of developing conceptual categories for grouping students, even when those categories emerged from observations rather than being imposed. Vic was part of the group of 10% of the students that the raters had disagreements as to which group described him. The reason for the raters disagreement was that Vic entered Metro as a Black School Alienated student and moved into the Black School Oriented group during the period of observation. The case study permits us to see in some detail the dynamics of what that move means, at least, for one student, Vic.

Comparison of Methods

In comparing the three research methods employed in the Metro research program, I will deal with four topics:

1. First, the types of advantages we observed in our research program from employing multiple methods.
2. Second the particular strengths and weaknesses of each major method we employed.
3. Third, some overall problems of the research design we carried out.
4. And fourth, description of the type of research model we hope to employ in subsequent research.

The previous presentations have sought to provide concrete examples of the advantages of multiple research methods that employ both quantitative and qualitative techniques. Our research program exemplifies four major types of advantages:

1. First, multiple methods reinforce the certainty with which we can draw specific conclusions. For example, the existence of student subgroups at Metro was initially established through participant observation. The reality of these classifications was reinforced when raters could achieve a high degree of agreement in classifying specific students in these categories, when pretests such as reading achievement revealed marked subgroup differences, and when background variables such as social class and previous track in school showed significant relationships to subgroup membership.

A second advantage of multiple methods is that they allow us to delve deeply into a particular area of interest, such as the dimensions that distinguish student-teacher relationships at Metro compared with other schools. As the previous presentations indicate, we are now at a point in our research program where we are about to complete separate analyses of this topic from School Climate Scale Questionnaire data, intensive interview data and parti-

cipant observation data. The subsequent comparisons of these results will allow us, we feel, to make a significant contribution to research on teacher-student relationships that will have considerable theoretical and practical value.

A third advantage of multiple methods is that particular methods are more effective in illuminating various parts of a topic under investigation. For example, participant observation supplies us information about the existence of subgroups. Achievement test data can then be analyzed to determine whether there are differential gains in reading achievement in the program for these subgroups. Then, participant observation can document details of program process that might be contributing to these differential reading gains.

A fourth advantage of multiple methods is in allowing us to explore the validity of our research instruments. For example, the inclusion of several approaches to measuring student attitudes toward other races, including a multiple choice questionnaire, sociogram, a series of interview questions rated for positive and negative mentions of the concept "other race", and extensive participant observation data on race relations allows us to cross-check the validity of our questionnaire scale.

These general overall advantages of the use of multiple methods, as employed in our research suggest some major strengths and weaknesses of the individual methods.

We see the strengths of participant observation as follows:

1. It allows the collection of data on a wide range of issues in the study of settings about which little is known. It should be re-emphasized as Steve Wilson stated that this strength is not limited to getting an initial rough idea of what is happening in a setting, but that properly conducted participant observation allows for constant rigorous refinement of hypotheses developed in areas under study.

2. It is especially effective in documenting details of institutional functioning that, based on our evidence, make or break attempted educational improvements. As a result, it has high potential for generating data that will be of direct use to program participants in improving their effectiveness.

3. Since it allows complex comparisons of verbal interactions and other behavior in varying situations, it serves as a powerful check on the tendency of subjects to respond to research initiatives with the responses that they feel are expected by the researcher or consistent with institutional values. This problem is critical in all research settings but is perhaps even more critical in settings like Metro where the official ideology is highly salient for almost every teacher and student.

The major weakness of participant observation that we experienced are two:

First, on several occasions, we were misled about the number of persons holding a certain opinion or acting in a certain way because of the high salience of the issue for a small group of very vocal students or teachers. For example, several vocal individuals created the impression that most students were dissatisfied with the counseling groups at Metro. However, a brief interview survey of students indicated that 90% of them liked the counseling groups and wished to retain them. We do not draw from this example the lesson that the participant observation is impressionistic and unreliable. With considerable effort, the same corrective conclusion could have been reached through participant observation. We merely conclude that participant observation is most effective if used in combination with other methods and that in many cases other methods provide a much more efficient method for gaining a better fix on a given issue.

A second weakness of our participant observation resulted from the attempt of one observer to study a school with diverse student subgroups. The observers race and other characteristics sometimes denied him access to significant behavior settings for certain subgroups or caused him to begin to see the school from the standpoint of those student subgroups with background characteristics most like his own. To help deal with this problem, we favor a diverse participant observation team in terms of race, sex, and other pertinent background characteristics, who view theinstitution from the perspective of particular subgroups.

The strengths of our structured interviews have already been reviewed by Emile Schepers. We see their major strengths as being:

1. First, they allow the collection of focused information on a particular topic that still retains the reality of the subject's own categories concerning the topic of interest, rather than those prestructured and imposed by the researcher.

2. Second, structured interviews allow the collection of information concerning the wholistic functioning of the individual, which again is particularly valuable in feeding back information to program participants in ways that have immediacy and power for them.

The major weaknesses of our structured interview work was:

> The enormous time required for data collection, transcription, and analysis, which still on too many critical questions does not yield sufficient data for meaningful quantitative analysis.

As Emile mentioned we hope to overcome this difficulty subsequently by using shorter interviews with larger samples, by spending much more time on participant observation as a precursor to interview design, and by engaging in more qualitative analysis of interviews rather than employing half-way but ultimately unsatisfactory compromises with quantitative analysis.

The strengths of attitude questionnaires and tests in our research effort are rather obvious, and don't need to be re-emphasized with this audience. We merely wish to underline once again the great utility of these quantitative instruments when they are used in conjunction with participant observation. Used in this way, participant observation suggests directions for the development of valid questionnaire items and for the subcategorizing of students for questionnaire analysis.

The weaknesses and dangers of the questionnaires are also well-recognized. First, they are of doubtful validity in many instances, given people's tendency to respond consistent with researchers expectations or institutional values. Second, we feel there is a limit in the potential of even the best questionnaires to document details of institutional process of

the type that can be documented by participant observation. Third, we should point out a hostility toward questionnaire administrations that increased over time in our Metro study and is quite typical of alternative schools.

From this view of the strengths and weaknesses of the three methods as we have employed them, we derive two general comments on the weaknesses of our overall research program.

1. First, we designed and administered questionnaires and interviews before doing participant observation and now feel strongly that a period of participant observation should precede such interview and questionnaire development. The limitations of time and money and uncertainties about the length of time we would have open access to the Metro School forced us to design our questionnaires and interviews immediately. In questionnaire and interview design, we felt strong inclinations not to ignore goals or proposed practices of Metro that might turn out to be important later, therefore, we created unwieldy questionnaire and interview instruments. As indicated earlier, this limited our sample size for the questionnaire and with it the possibility for many types of quantitative analysis. Further, in choosing subsamples for interview administration before doing any participant observation, we employed criteria for subsample selection that in retrospect were not the most useful ones. In general, despite the length of our interview and questionnaire instruments, we kept finding items or issues that we wished we had included.

2. Second, there was in practice too little feedback between the different methodologies. Participant observation has informed the analysis of questionnaires and interviews, but did not result in substantial changes in their basic format during the data collection phase. Further, since methods of analysis were not set up from the beginning for questionnaires, tests, and interviews, they were in general analyzed too late to have much impact on participant observation. Ideally, we feel there should be a constant flow of results across methods

during instrument development, data collection, and data analysis phases that we did not begin to achieve.

In Figure VII, we have sketched a revised research model that we would ideally employ in studying the development of another school like Metro. We would begin participant observation in the earliest phases of school planning possible and continue this process until the time that a second cohort of students entered the school. During planning and operation with the first cohort, we would carry out limited interviewing and questionnaire administration drawing heavily on insights derived from the participant observation. We would then carry out the type of experimental study that we began immediately at Metro with the second cohort of students using the interview and questionnaire instruments developed with the first cohort and continuing the participant observation.

We should emphasize that the participant observation is not viewed in the proposed approach merely as a preliminary step to questionnaire and test development, but as we have tried to emphasize throughout this presentation the constant underpinning of our work. We look to each method in all phases of our research for its unique potential to contribute to our understanding of the settings we are studying.

In conclusion, we hope that we have given you some feeling for specific ways in which such complementary use of methods is possible, despite the fact that our work is still being completed and has the types of weaknesses we have pointed out. We feel strongly that we are on the right track, and that perhaps the conditions currently exist in educational research for a basic shift in the paradigms governing research activities, so that more studies will be carried out similar to the one we have described.

Figure 1.
SCHEMATIC REPRESENTATION OF RESEARCH DESIGN

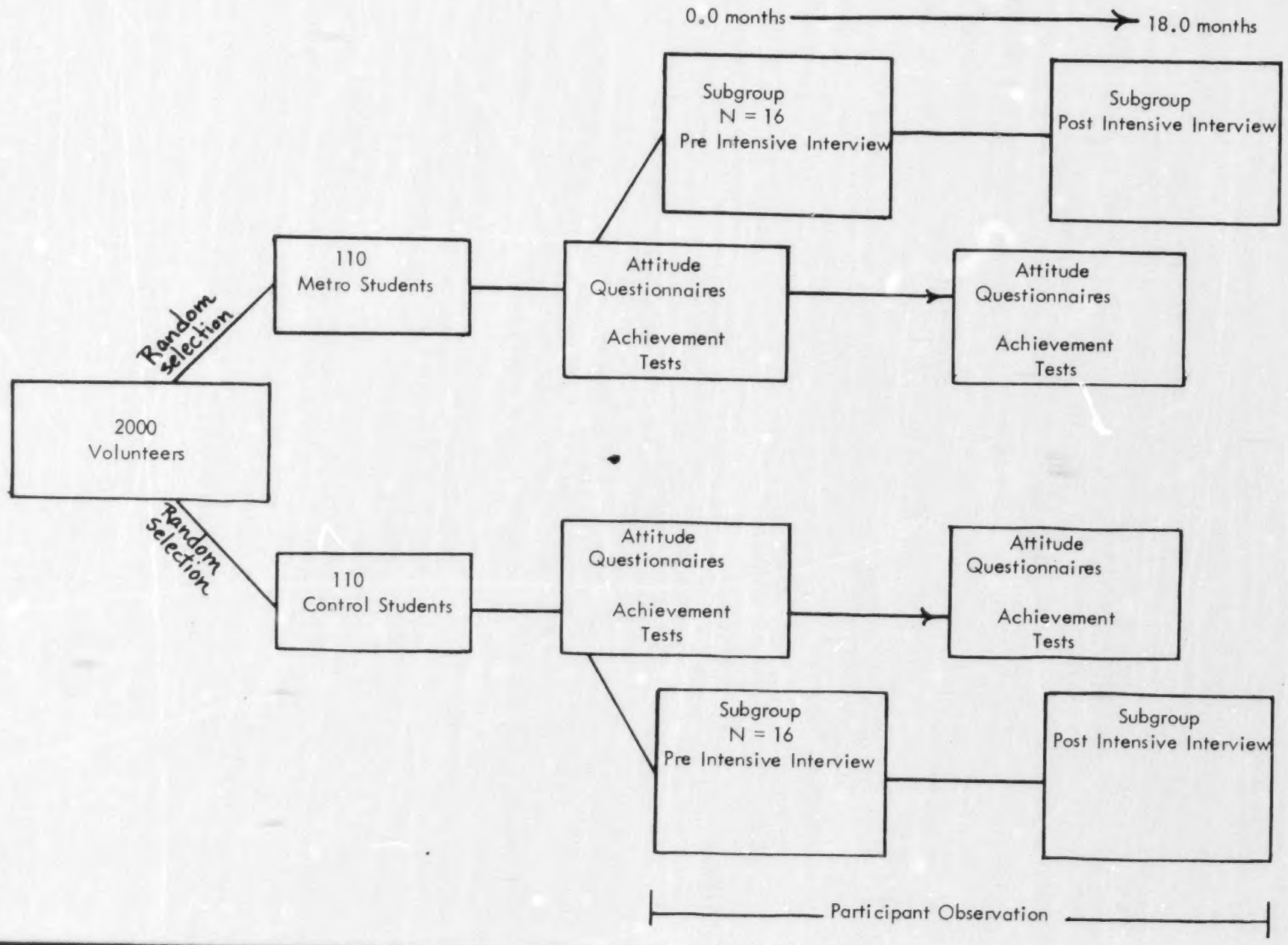

Figure II

DESCRIPTION OF STUDENT SUBGROUPS BASED ON PARTICIPANT OBSERVATION AT THE TIME STUDENTS ENTERED METRO.

Student subgroups and patterns of association within the Metro program were closely related to the life styles, attitudes toward schooling and patterns of association students had developed in the traditional school

Black School-Oriented: The Black School-Oriented students conformed to the expectations of their previous schools, in terms of both academic performance and personal behavior. They viewed school in terms of getting a good job and going to college. They tended to complete school work faithfully and had average to superior skill levels and records of past achievement. They came from lower to middle income background.*

Black Consciousness/School-Oriented: These students had many characteristics in common with the Black School-Oriented group. However, they were more aware of the political dimensions of the Black consciousness movement and talked about success in school as a means for gaining skills that would further Black political development.

Black School-Alienated: The previous experiences of these students had been characterized by academic failure and conflict with the school. They identified strongly with black students from similar backgrounds. These students also identified with the esthetic elements of black consciousness in terms of dress and music. They tended to come from low-income families and often lived in large housing projects or physically decaying inner city neighborhoods.

White School-Oriented: These students had the same general characteristics as Black School-Oriented students.

White School-Alienated/Ethnic: These students had a history of past school experience similar to the Black School-Alienated students. Their family income levels fell in the low to middle range. Members of the group generally saw themselves as "greasers", and thus acted out their alienation from the school in a manner that is consistent with the values of urban ethnic white youth. They were particularly hostile to the White School-Alienated/Youth Culture students.

* Income levels were determined on the basis of parents' occupations.

White School-Alienated/Youth Culture: These students, mostly from middle income backgrounds, identified with the "counter culture." They tended to be articulate and expressed radical political views. They may have recently failed in school because they were "fed up with it," but their past school records included periods of high achievement, and they were generally above grade level in basic skills.

Figure III
A

P-values for Multivariate and Univariate Analyses of Covariance. Metro vs. Control on Post-test Variables. Pretests as Covariates.

1.	Overall Multivariate Test	p less than .0001
2.	Self-image	p less than .8917
3.	Sense of Control	p less than .8512
4.	Breadth of City Experience	p less than .0001
5.	Preference for Active Learning	p less than .5312
6.	Perception of School Climate	p less than .0001
7.	Racial Attitudes	not yet analyzed
8.	Characteristics of Ideal Job	differences observed, tentative
9.	Nature of Hoped-For Life Accomplishments	differences observed, tentative
10.	Reading Achievement	p less than .0342
11.	Math Achievement	p less than .0684

Figure III
B

Example of School Climate Item.

If a student really believes something, but most other students don't, he'd better not talk about it.

Exactly like my school	A little like my school	Not much like my school	Not at all like my school

Figure III - C

Percent of student responses fitting "ideal" response pattern on School Climate Scale.

	Pretest	Posttest
Metro Students	14% (rating old school)	53% (rating Metro)
Control Students	18% (rating present school)	18% (rating old school)

Figure III - D

Number and percent of students classified in six student subgroups about whom complete pre and post information is available:

	Number	% of Total
Black School Oriented	19	26%
Black School Oriented Politically Conscious	5	7%
Black School Alienated	9	13%
White School Oriented	26	36%
White School Alienated Youth Culture	11	15%
White School Alienated Ethnic	2	3%
	72	100%

Figure III - E

P-Values for Multivariate and Univariate Analyses of Covariance. Metro Black School Alienated vs. Metro White School Alienated - Youth Culture.

Variable	Pretest	Posttest	Posttest with Pretest as Covariate
Overall Multivariate Test	.0002	.0064	.9634
Self-Image	.2751	.0439	.9676
Sense of Control	.2694	.0133	.7643
Breadth of City Experiences	.0064	.0136	.5394
Preference for Active Learning	.0036	.0226	.9898
Perceptions of School Climate	.1368	.0043	.6850
Reading Achievement	.0001	.0001	.8668
Math Achievement	.0001	.0006	.5829

Figure III - F

Selected Pretest and Posttest Means and Difference Scores for Metro Black School Alienated, Metro White School Alienated Youth Culture and Control Group.

Variable	Group	Pretest	Posttest	Difference
Breadth of City Experience	Metro BSA	40.5	47.8	+ 7.3
	Metro WSA-YC	51.9	57.1	+ 5.2
	Control	44.2	45.8	+ 1.6
School Climate	Metro BSA	194.7	239.4	+44.7
	Metro WSA-YC	173.2	292.3	+119.1
	Control	216.1	214.8	- 1.3
Reading Achievement	Metro BSA	259.7	264.2	+ 4.5
	Metro WSA-YC	292.9	303.4	+10.5
	Control	274.1	275.3	+ 1.2

Figure IV

EXAMPLES OF CONTENT ANALYSIS OF STRUCTURED INTERVIEWS

1. Categories for the Description of Teachers (Dimensions along which students describe their teachers).

CATEGORY # 1: DIALOGUE

Positive Pole: The teacher who dialogues.	Negative Pole: The teacher who does not dialogue.
The dialogue teacher is described as one who will communicate fully with the student: The student feels that he can express an idea to the teacher, and the teacher will understand and try to communicate this understanding. E.g., "you can really rap with this guy" or "he listens to you".	The non-dialoguing teacher leaves the student with the feeling that he and the teacher have been "talking past" each other, i.e. that what the student says does not quite connect up with what the teacher says, etc. "I don't feel that I can talk to him", "I just don't seem to be getting through.

CATEGORY # 2: NON-COMPARTMENTALIZATION

Positive Pole: The teacher who relates to the whole student.	Negative Pole: The teacher who compartmentalizes the student, relates to him in the student-teacher role relationship only.
This teacher gives the impression to the student that it is a matter of one human being to another, not a student to a teacher. Will get interested in the student's personal life and talk seriously about non-school matters (not in the nature of "nosy-teacher pretending to be a social worker", but as a friend).	Never lets his hair down, so to speak: Is always "Mr. Thompson" and resists efforts to relate to students in any other way.

CATEGORY # 7: NON-AUTHORITARIANISM

Positive Pole: The non-authoritarian teacher.	Negative Pole: The authoritarian teacher.
This teacher gives off the idea that	This teacher is a martinet who believes

the student is a free and equal individual with many personal rights, does not use unnecessary or petty disciplinary techniques, and allows students to develop their own ideas and procedures.

in scolding, punishment and verbal (sometimes physical) abuse to have his way (and it must always be his way with the students.)

II. Categories for the Description of Schools (Dimensions along which students describe their schools in general.)

CATEGORY # 1: PERSONAL FREEDOM FROM SCHOOL RULES

Positive Pole: The school leaves one feeling that one is not controlled or restricted in an uncomfortable or unpleasant way.

Negative Pole: The school leaves one feeling that one is hemmed in by rules and regulations, is trapped.

E.g. student praises the fact that one can more or less come and go and behave as one pleases without being "hassled" by petty rules.

Student complains about hall passes, dress codes, monitoring of his casual behavior.

CATEGORY # 2: FREEDOM OF ACADEMIC CHOICE

Positive Pole: The school gives the student the feeling of being able to plot out his own academic career as he wishes.

Negative Pole: The school leaves the student feeling that he is locked into a rigid pre-arranged program.

E.g. praise of the variety and options available to the student, etc.

E.g. complaints about required courses, rigid programs, etc.

CATEGORY # 3: FREEDOM OF PERSONAL EXPRESSION IN CLASS

Positive Pole: Student feels that he can speak up and express divergent ideas in class without being graded down or yelled at or having the teacher report him as subversive.

Negative Pole: Student feels that the teachers force their ideas on the student and that there is no chance to talk back or object or voice a different opinion.

E.g. praise for the degree of open discussion of controversial issues in social studies, etc.

E.g. complaints about teachers propagandizing students, brainwashing them etc.

CATEGORY # 10: FEELING OF PREPARATION FOR THE FUTURE

Positive Pole: The student perceives that the school is preparing him well for college and/or work.

Student makes specific statements concerning the helpfulness of the program in preparing him for the practical needs of the future.

Negative Pole: The student feels or fears that what goes on in the school is not relevant to his future survival.

Student complains or expresses doubt of how much good the school and its programs will do him in getting into college or finding a job.

Figure V

GROSS FREQUENCY OF POSITIVE AND NEGATIVE CHARACTERIZATIONS OF SCHOOLS: METRO AND CONTROL, PRE AND POST

(Based on incomplete tabulations, April 16, 1974)

	Negative Characterizations	Positive Characterizations
Metro-Pretest (Rating former school)	66	26
Metro Postest (Rating Metro)	31	172
Control-Pretest	66	44
Control-Postest	43	15

Figure VI

GROSS FREQUENCY OF POSITIVE AND NEGATIVE CHARACTERIZATIONS OF TEACHERS: METRO AND CONTROL, PRE AND POST

(Based on incomplete tabulations, April 16, 1974)

	Negative Characterizations	Positive Characterizations
Metro-Pretest (Rating former school)	16	12
Metro-Postest (Rating Metro)	21	38
Control-Pretest	23	32
Control-Postest	8	9

Figure VII

REVISED RESEARCH MODEL

Cohort 1.

(1) Participant Observation.

(2) Trial and small-scale interviewing and questionnaire use growing from participant observation.

Cohort 2.

(1) Experimental - control study employing interviews and questionnaires developed with Cohort 1.

(2) Continued participant observation.

(3) Continued complementary use of three methods in combination.

Figure VIII

CNS PUBLICATIONS RELEVANT TO AERA PRESENTATION

The following CNS publications are available from the Center. A full list of CNS publications including descriptions and analysis of new school programs is also available.

1. "Strengthening Alternative Schools" (Harvard Educational Review. Vol. 42, No. 3; August 1972) describes and analyzes the patterns of development that alternative schools follow, and provides a proposal for research, evaluation and feedback aimed at strengthening alternative schools. The case study of student involvement in decision-making at Metro High School in Chicago is one tested example for this proposal. Reprints available from CNS. 37 pp. $.75.

2. A Proposal for Completion of Research on the Development of an Alternative School describes the research plan developed for studying a specific alternative school. This research plan, which was carried out at Metro High School in Chicago, is aimed at understanding both the day-to-day process of education in the school and the effects of the educational program on Metro students. Appendices included. Distributed through CNS. November, 1971. Mimeographed. 21 pp. $1.00.

3. "Do Too Many Cooks Spoil The Broth?" Student-Teacher-Parent Participation in Decision-Making in Alternative Schools looks at some of the complex problems raised when alternative schools attempt to simultaneously include students, teachers, and parents in the formal decision-making processes within their first years. First-hand observations are drawn from two types of alternative schools; public high schools "without walls", and private elementary "free" schools. CNS. May, 1973. Mimeographed. 20 pp. $.50.

4. You Can Talk To the Teachers: Teacher-Student Relations in an Alternative School describes the typical ways students and teachers interacted in a public high school "without walls". This study, based on two years of participant observation, analyzes the norms underlying these relationships and some of the effects of these interactions on organizational functioning and student development. CNS. February, 1974. Mimeographed. 44 pp. $1.25.

5. A Guide to Ethnographic Research in Schools explains the rationale for using the anthropological approach in school settings and briefly describes the techniques of conducting this kind of research. While it deals with theoretical issues it is written for those who have had very little previous exposure to these approaches. CNS. April, 1974. Mimeographed. 23 pp. $1.00.

6. Metro School: A Report on the Progress of Chicago's Experimental "School Without Walls" includes the initial Rationale and Program, the course catalogue, and an in-depth report on the forst semester. January, 1971. Paperbound. $6.00.

7. The Second Semester is a detailed progress report on the development during Metro's second semester focusing on the key problems of curriculum development, counseling, and staff development. May, 1971. Mimeographed. 54 pp. $2.50.

8. Third Semester reports on the developments in Metro's third semester which include a major crisis in the school's relation to the Chicago Board of Education. Recommendations for the future development of the school are included. October, 1971. Mimeographed. 61 pp. $2.50.

Notes for ordering:

1. Numbers 6, 7, and 8 are available as a unit for $9.00.

2. Payment must accompany orders. This policy is due to the high administrative cost of billing and other paperwork when orders are not prepaid. Make all checks and money orders payable to: Center for New Schools. Include 25¢ handling and shipping charge for each copy ordered.